

AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to Figure 2 and a new Figure 2B. The amendment to the drawings is as follows:

Sheet 1: Please amend Figure 2 by changing the figure designation to Figure 2A and removing the cross sectional view of element 10 as shown.

Sheet 1: Please add new Figure 2B that illustrates the cross sectional view of element 10 previously included in Figure 2 as shown.

Sheet 2: Please provide Figure 3 on a new sheet as shown.

Attachments: Two (2) Replacement Sheets

One (1) Annotated Sheet showing changes

REMARKS

This communication is a full and timely response to the non-final Office Action dated March 23, 2005. By this communication, the specification, Fig. 2, and claims 1 and 2 have been amended, and Figure 2B has been added.

The specification has been amended based on the changes to Fig. 2. In particular, paragraphs [0010], [0018], and [0019] have been amended to reflect the elements shown in Figs. 2A and 2B. In addition, a new paragraph has been added between paragraphs [0010] and [0011] to describe the new Figure 2B. No new matter has been added.

In the drawings, Fig. 2 has been amended to remove the section view of element 10, and Fig. 2 has been newly designated as Fig. 2A. Fig. 2B has been added to include the sectional view previously included in Fig. 2. No new matter has been added.

Claim 1 has been amended to recite a spiral coil shaped insertion body for insertion into a female screw and for receiving a male screw which is screwed in is formed by coiling a wire having a rhombic cross section. Moreover, each instance of "taper" has been changed to "tapered." No new matter has been added.

Claim 2 has been amended to improve idiomatic English and form based on the changes to claim 1. No new matter has been added.

Claim Objections

Claim 1 was objected to for alleged informalities. Applicant respectfully traverses this rejection. However, in an effort to expedite prosecution, Applicant has amended the preamble of claim 1 and changed each instance of "taper" to "tapered," as discussed above. Accordingly, Applicant respectfully requests that the objections to claim 1 be withdrawn.

Drawing Objections

Fig. 2 of the drawings was objected to for improperly showing a cross sectional view of element 10. As discussed above, Applicant has newly designated Fig. 2 as Fig. 2A and removed the cross-sectional view of element 10. Moreover, Applicant has added Fig. 2B, which includes the cross-sectional view of element 10 previously shown in Fig. 2. Accordingly, Applicant respectfully requests that the objections to the drawings be withdrawn.

Rejections Under 35 U.S.C. §102

Claim 1 was rejected under 35 U.S.C. §102(b) as anticipated by *Kobusch*, U.S. Patent No. 6,146,073. Applicant respectfully traverses this rejection.

Claim 1 recites a spiral coil shaped insertion body for insertion into a female screw and for receiving a male screw which is screwed in is formed by coiling a wire having a rhombic cross section, the spiral coil shaped insertion body comprising a cylinder portion having a fixed outside diameter; and a tapered portion having an outside diameter gradually reduced from the cylinder portion toward the distal end of the insertion body, the outside thread pitch diameter of the cylinder portion being greater than the pitch diameter of the female screw, and the inside thread pitch diameter of a region of the tapered portion covering one or more turns being smaller than the pitch diameter of the male screw.

Kobusch discloses that an insert attached to a female screw should be prevented from interfering with a male screw, so that the insert cannot coil itself around the male screw. *See* col. 2, lines 14-17. Thus, from this teaching it is clear that the insert of *Kobusch* and the male screw around which the insert coils itself with the help of elasticity cannot move inside the female screw. In particular, the insert 10 is designed to be threaded into a tapped hole of a workpiece 12. In addition, *Kobusch* fails to disclose, teach, or suggest at least that the inside thread pitch diameter of a region of the tapered portion covering one or more turns being smaller than the pitch diameter of the male screw. At best, *Kobusch* discloses a differential angle of the insertion zone of end coil 15 and intermediate coil 23 being 720°.

To properly anticipate a claim, the document must disclose, explicitly or implicitly, each and every feature recited in the claim. *See Verdegall Bros. v. Union Oil Co. of Calif.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). *Aoyama* fails to disclose, teach, or suggest every element recited in independent claim 1, therefore this claim is not anticipated by *Kobusch*. Accordingly, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. §102 be withdrawn, and claim 1 be allowed.

Rejections Under 35 U.S.C. §103

Claim 2 was rejected under 35 U.S.C. §103(a) as unpatentable over *Kobusch* in view of *Goodwin et al.*, U.S. Patent No. 5,730,566. Applicant respectfully traverses this rejection.

Claim 2 depends from claim 1 and additionally recites that the distal end of said tapered portion is extended to form a small-diameter cylinder portion.

The Office Action acknowledges that *Kobusch* fails to disclose, teach, or suggest the aforementioned elements of claim 2, and relies on *Goodwin* to remedy this deficiency.

The tapered portion recited in claim 2 has a structure that is flexible and adheres closely to a male screw to generate a strong friction force. Namely, the small-diameter cylinder portion formed by the tapered portion provides the capability to closely adhere to a male screw and generate the strong friction force.

In contrast, *Goodwin* discloses a dog point 18 and a transitional thread 24 of which the diameter gradually increases. A fastener is used to adjust an inclination of a nut 22 screwed into the insert so that the nut 22 is adapted to the threaded bolt 10. The threaded bolt 10, including the dog point 18 and transitional threads 24 are not constructed from flexible materials. The threaded body 10 of *Goodwin* is not analogous to the small-diameter cylinder portion recited in claim 2, and thus fails to remedy the deficiencies of *Kobusch*. In fact, *Goodwin* teaches away from the teachings of *Kobusch* as evidenced by the fact the diameter of the dog point 18 is smaller than the diameter of the nut 22 such that the dog point 18 fails to adhere to the nut 22 or generate a strong friction force with nut 22.

In summary, *Kobusch* and *Goodwin* fail to disclose, teach, or suggest at least that the distal end of said tapered portion is extended to form a small-diameter cylinder portion, as recited in claim 2. At best, the combination of *Kobusch* and *Goodwin* teach a threaded bolt 10 having a dog point 18 having a diameter that is 90% of the inside of a nut 22. Accordingly, a *prima facie* case for obviousness has not been established.

To establish *prima facie* obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Moreover, obviousness "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." *ACS Hosp. Sys. V. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). For at least the above reasons, Applicant respectfully requests that the rejection of claim 2 be withdrawn, and claim 2 be allowed.


Conclusion

Based on at least the foregoing amendments and remarks, Applicants submit that claims 1 and 2 are allowable, and this application is in condition for allowance. Accordingly, Applicants request favorable reexamination and reconsideration of the application. In the event the Examiner has any comments or suggestions for placing the application in even better form, Applicants request that the Examiner contact the undersigned attorney at the number listed below.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. TOC-0008 from which the undersigned is authorized to draw.

Dated: June 14, 2005

Respectfully submitted,

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Attachments: Two (2) Replacement Sheets (Figs. 1-3)
One (1) Annotated Sheet (Figs. 2A and 2B)

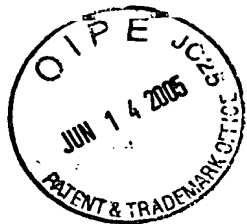
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Application No.: 10/679,421
(80408-0008)

Docket No.: TOC-0008

REPLACEMENT SHEET



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(80408-0008)

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ANNOTATED SHEET



Annotated Sheet

FIG. 1

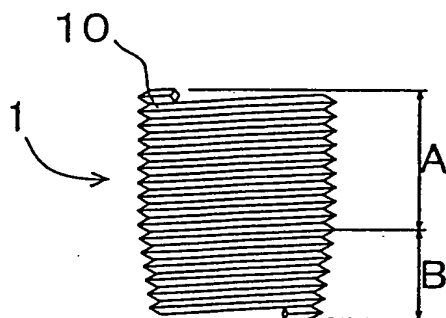
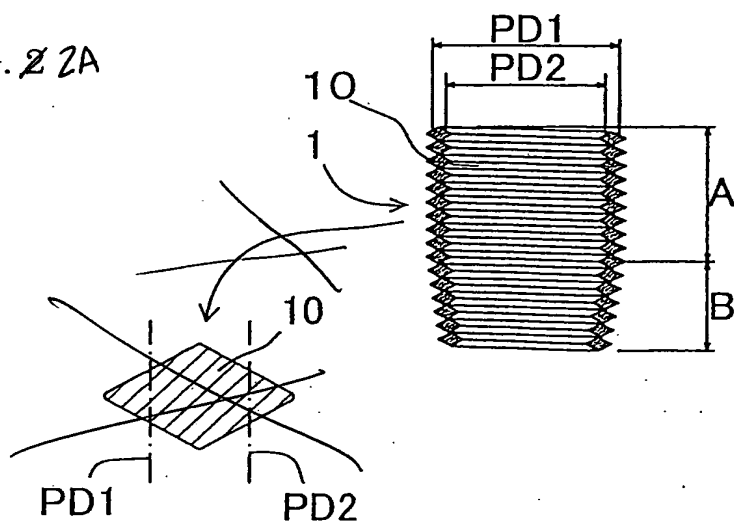


FIG. 2A



~~FIG. 3.~~

FIG. 2B

